

REMARKS

This is a full and timely response to the non-final Office action mailed October 2, 2006. Reexamination and reconsideration in view of the foregoing amendments and following remarks is respectfully solicited.

Claims 1-43 are pending in this application, with Claims 1, 18, 36, and 40 being the independent claims. Claims 1-35 were previously withdrawn. Claims 36 and 40 have been amended. No new matter is believed to have been added.

Rejections Under 35 U.S.C. § 102

The Office Action states that claim 36 is rejected under 35 U.S.C. § 102 as allegedly being anticipated over U.S. Pat. Appn. No. 2003/0171239 to Patel et al. (“Patel”) evidenced by www.cop.ufl.edu/safezone/prokai/pha5100/Eagents.htm (“UFL reference”) and www.princeton.edu/~cebic/chelbindadvanced.html. (“Princeton reference”).

Independent claim 36 has been amended and now recites the step of, *inter alia*, applying a post-CMP wetting composition to the wafer, wherein the post-CMP wetting composition comprises a non-ionic surfactant including block copolymers of ethylene oxide and propylene oxide, the non-ionic surfactant having an HLB value in the range from 1 to 15, in an amount of between about .005-10% weight of the composition.

Patel relates to methods and compositions for treating a surface of a substrate by foam technology that includes at least one treatment chemical. See Abstract. Patel does not teach or suggest a composition that includes block copolymers of ethylene oxide and propylene oxide. Thus, as Patel fails to disclose, either explicitly or inherently, at least the above-noted element of claim 36, reconsideration and withdrawal of the §102 rejection is therefore solicited.

Rejections Under 35 U.S.C. § 103

Claims 37 and 39 are rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Patel in view of “Comparing the effectiveness of knobby and ridged post-CMP cleaning brushes”, Micron Technology, July 1999, Micromagazine by Cooper

et al. (“Cooper”). This rejection is respectfully traversed.

Claims 37 and 39 depend from claim 36 and therefore rely on the arguments presented above with regard to Patel. Moreover, Cooper does not make up for the deficiencies of Patel. Although Cooper teaches using different brush designs in a CMP process, nowhere is there disclosure of a non-ionic surfactant including block copolymers of ethylene oxide and propylene oxide, the non-ionic surfactant having an HLB value in the range from 1 to 15, in an amount of between about .005-10% weight of the composition, as recited in claim 36. Accordingly, as Patel and Cooper fail to disclose, either explicitly or inherently, at least the above-noted element of claim 36, hence, claims 37 and 39, reconsideration and withdrawal of the §103 rejection is therefore solicited.

Claim 38 is rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Patel in view of Cooper further in view of U.S. Pat. No. 5,329,732 to Karlsrud et al. (“Karlsrud”). This rejection is respectfully traversed.

Claim 38 depends from claims 36 and 37 and therefore relies on the arguments presented above as they relate to Patel and Cooper. Moreover, Karlsrud does not make up for the deficiencies of Patel and Cooper. Specifically, Karlsrud teaches a wafer polishing apparatus that includes a wafer polishing assembly having a plurality of wafer carriers for substantially simultaneously polishing a plurality of wafers against a rotating polishing surface. See Abstract. However, there is no mention or suggestion whatsoever of using a non-ionic surfactant including block copolymers of ethylene oxide and propylene oxide, the non-ionic surfactant having an HLB value in the range from 1 to 15, in an amount of between about .005-10% weight of the composition, as recited in claim 36. Accordingly, as Patel, Cooper, and Karlsrud fail to disclose, either explicitly or inherently, at least the above-noted element of claim 36, and hence, claim 38, reconsideration and withdrawal of the §103 rejection is therefore solicited.

Claim 40 is rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Patel, U.S. Patent No. 7,087,564 to Misra (“Misra”) and Kern, Editor of handbook of Semiconductor Wafer Cleaning Technology – Science, Technology, and Applications (“Kern”). This rejection is respectfully traversed.

Claim 40 has been amended to now recite a non-ionic surfactant including block copolymers of ethylene oxide and propylene oxide.

As mentioned above, Patel relates to methods and compositions for treating a surface of a substrate by foam technology that includes at least one treatment chemical. See Abstract. Patel does not teach or suggest a composition that includes block copolymers of ethylene oxide and propylene oxide. Moreover, neither Misra nor Kern make up for these deficiencies. Misra discloses matching the pH of the cleaning solution used after CMP to that of the last slurry used on the wafer surface. See Abstract. Kern discusses the effect of ionic strength on electric double layer repulsion. However, neither Misra nor Kern discusses a composition that includes block copolymers of ethylene oxide and propylene oxide. Thus, as Patel, Misra, and Kern fail to disclose, either explicitly or inherently, at least the above-noted element of claim 40, reconsideration and withdrawal of the §103 rejection is therefore solicited

Claims 41 and 43 are also rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Patel in view of Misra, Kern, and Cooper. Claims 41 and 43 depend from claim 40 and therefore rely on the arguments presented above with regard to Patel, Misra, and Kern. Moreover, Cooper does not make up for the deficiencies of Patel, Misra, and Kern. Although Cooper teaches using different brush designs in CMP, nowhere is there disclosure of applying a composition that includes block copolymers of ethylene oxide and propylene oxide, as recited in claim 40. Accordingly, as Patel, Misra, Kern, and Cooper fail to disclose, either explicitly or inherently, at least the above-noted element of claim 40, and hence, claims 41 and 43, reconsideration and withdrawal of the §103 rejection is therefore solicited.

Claim 42 is rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Patel in view of Misra, Kern, and Cooper further in view of U.S. Pat. No. 5,329,732 to Karlsrud et al. (“Karlsrud”). This rejection is respectfully traversed.

Claim 42 depends from claims 40 and 41 and therefore relies on the arguments presented above as they relate to Patel, Misra, Kern, and Cooper. Moreover, Karlsrud does not make up for the deficiencies of Patel, Misra, Kern, and Cooper. Specifically,

Karlsrud teaches a wafer polishing apparatus that includes a wafer polishing assembly having a plurality of wafer carriers for substantially simultaneously polishing a plurality of wafers against a rotating polishing surface. See Abstract. However, there is no mention or suggestion whatsoever of applying a CMP wetting composition that has a composition that includes block copolymers of ethylene oxide and propylene oxide, as recited in claim 40. Accordingly, as Patel, Misra, Kern, Cooper, and Karlsrud fail to disclose, either explicitly or inherently, at least the above-noted element of claim 40, and hence, claim 42, reconsideration and withdrawal of the §103 rejection is therefore solicited.

Support for Claim Amendments

As noted above, claims 36 and 40 have been amended. Support for the amendments to claims appear at least in paragraphs [0022] and [0033]. No new matter is believed to have been added.

Conclusion

Based on the above, independent Claims 36 and 40 are patentable over the citations of record. The dependent claims are also deemed patentable for the reasons given above with respect to the independent claims and because each recite features which are patentable in its own right. Individual consideration of the dependent claims is respectfully solicited.

The other art of record does not disclose or suggest the inventive concept of the present invention as defined by the claims.

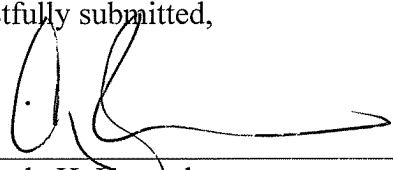
Hence, the Applicants submit that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

Should the Examiner have any questions or wish to further discuss this application the Examiner is requested to telephone the undersigned attorney at the below-listed number.

If for some reason the Applicants have not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

Dated: 12/29/06

By: 
Cindy H. Kwacala
Reg. No. 47,667

INGRASSIA FISHER & LORENZ, P.C.
(480) 385-5060